

gyro chemical & equipment co., inc.

Telex 791910 - Cable Address "GYRO" Houston - FAX (713) 479-6239
Mailing Address - P. O. Box 853 Deer Park, Texas 77536-0853
Office & Plant - 5206 Railroad Ave.
Phone 713/479-5905



TECHNICAL DATA SHEET

VOYAGE CLEAN

DESCRIPTION: GYRO VOYAGE CLEAN is a newly developed high solvency base emulsifier and cleaner with excellent oil-in-sea water emulsification ability for cleaning and gas freeing petroleum oil tanks while the ship is at sea. This product, when applied with sea water, has exceptional and effective cleaning ability, permitting tank cleaning to be done in route, thus enabling the ship to arrive ready for inspection and/or repair work.

SPECIFICATIONS:	Appearance	Pale amber liquid
	Specific gravity, 60/60°F	0.96
	Pounds per U.S. gallon	8.0
	Kilograms per liter	0.96
	Flash point, C.O.C., min	150°F (65.5°C)
	Fire point, C.O.C., min	160°F (71°C)
	Odor	Mild petroleum
	Chlorinated hydrocarbons, heavy metals, cresols	None
	pH value of water emulsion	Neutral
	Corrosion all metals	None
	Solubility, water	Emulsifiable
	Solubility, oil	Complete
	Threshold limit value	200 p.p.m.
	Biodegradability	Complete
	Stability, storage	Indefinite

APPLICATION: For cleaning and gas freeing tanks from bunker C, crude oil and other petroleum products using the "at sea method", use 1 gallon VOYAGE CLEAN for each ton of Butterworth water used.

When cleaning double bottom tanks, 2 applications are required. First dosage is 1 gallon of VOYAGE CLEAN to each ton of seawater put into tank. The second application is also 1 gallon VOYAGE CLEAN to each ton of seawater used.

For detailed cleaning instructions for both applications, please contact a Gyro representative or contact Gyro's main office.

THIS PRODUCT IS UNITED STATES COAST GUARD APPROVED AS AN ARTICLE OF STORES ON BOARD VESSELS.

PRECAUTIONS: VOYAGE CLEAN contains petroleum hydrocarbons and detergents. Avoid breathing of vapors. Avoid skin and eye contact. In case of skin contact, wash with water and apply mild cream. In case of eye contact, flush with plenty of water and get medical attention.

**FOR INDUSTRIAL USE ONLY - DO NOT TAKE INTERNALLY
KEEP OUT OF REACH OF CHILDREN**

PACKAGING: VOYAGE CLEAN is available in 55, 30 and 5 gallon non-returnable steel containers or in bulk storage units.

TEL 1-800-222-1818 10:50 10-7-92 10:50

TEL 1-800-222-1818

11:30 8/26 2001

0001

MAR & IND SPEC

0826 213 408

11:14 09/06/96

M29 ZINC

V.A.E. SPARES CORPORATION
MATERIAL SAFETY DATA SHEET102272512
PAGE 1
09-013F2NCUSTOMER NAME: SHREWD MOUL STORE
CUSTOMER NUMBER: 72260000
CUSTOMER FAXCODE: 2222562

CUSTOMER NUMBER: 72260000

SECTION 1. PRODUCT IDENTIFICATION

MANUFACTURERS ADDRESS: 1601 THIRD STREET SOUTH, MINNEAPOLIS, MN 55419
 TEL: (612) 220-9221
 24 HR EMERGENCY PHONE #: 8-00-220-5625
 CHEMICAL NAME OR FORMULA: POLY(1-PHENYL-1-VINYL-1,3-PHENYLENE)
 FORMULA: C₁₄H₁₂Cl₂-C₆H₄-CO
 TRADE NAME: ZINC OXIDE FOR COATINGS LIQUID
 REVISION DATE: 08-19-90 DATE PRINTED: 08-15-90

SECTION 2. HAZARDOUS INGREDIENTS

APPENDIX

NAME	PPM	IRL	IDLH	RR	RR	RR	RR
COPOLY(METHACRYLIC ACID-1,3-BUTYLENE SULFOCARBOXYLATE)	15	100% TWA	100.00 PPM				
CAS: 1330-20-1 CHEMICAL: PHENYL, BIS(2-METHOXYETHYL) ETHER		100% STEL	100.00 PPM				
		OSHA PEL	100.00 PPM				
		STELING	NOT ESTAB				
		REGDOS	NOT ESTAB				
COPOLY(METHACRYLIC ACID-1,3-BUTYLENE SULFOCARBOXYLATE)	62	100% TWA	20.00 PPM				
CAS: 12002-38-2 CHEMICAL: FLUOROPOLYMER		100% STEL	100.00 PPM				
		OSHA PEL	20.00 PPM				
		STELING	NOT ESTAB				
		REGDOS	NOT ESTAB				
COPOLY(1,3-BUTYLENE SULFOCARBOXYLATE)	202	100% TWA	100.00 PPM				
CAS: 10009-06-2 CHEMICAL: SULFOIC ACID, ETHYL ESTER		100% STEL	100.00 PPM				
		OSHA PEL	100.00 PPM				
		STELING	NOT ESTAB				
		REGDOS	NOT ESTAB				
COPOLY(1,3-BUTYLENE SULFOCARBOXYLATE)	106	100% TWA	20.00 PPM				
CAS: 636-76-2 CHEMICAL: ETHYL(1,3-BUTYLENE SULFOCARBOXYLATE)		100% STEL	100.00 PPM				
		OSHA PEL	20.00 PPM				
		STELING	NOT ESTAB				
		REGDOS	NOT ESTAB				
COPOLY(1,3-BUTYLENE SULFOCARBOXYLATE)	202	100% TWA	100.00 PPM				
CAS: 107-38-2 CHEMICAL: 1-METHOXY-2-PROPANOL		100% STEL	100.00 PPM				
		OSHA PEL	100.00 PPM				
		STELING	NOT ESTAB				
		REGDOS	NOT ESTAB				
COPOLY(1,3-BUTYLENE SULFOCARBOXYLATE)	51	100% TWA	200.00 PPM				
CAS: 75-52-3 CHEMICAL: 2-BUTANONE		100% STEL	200.00 PPM				
		OSHA PEL	200.00 PPM				
		STELING	NOT ESTAB				
		REGDOS	NOT ESTAB				

4.11 - DANGER LEVEL: SEE SECTION 6.

SECTION 3. PHYSICAL DATA

BOTTLING POINT: 150.00 °F.
 VAPOR PRESSURE: 100 MM Hg @ 70 DEG F: 76.9
 VAPOR DENSITY: 1.00: 4.1
 SPECIFIC GRAVITY: 1.05
 PERCENT VOLATILE BY WEIGHT: 35.72
 EVAPORATION RATE (TOMTAO ACETATE = 1.0): 5.6
 SOLUBILITY IN WATER: 0.0
 APPEARANCE AND COLOR: GRAYISH FOR A COATINGS PRODUCT

V.A.E. SPARES CORPORATION
MATERIAL SAFETY DATA SHEET102272512
PAGE 1
09-013F2N

SECTION 4. FIRE AND EXPLOSION HAZARD

FLASH POINT (COCPP DEF): 65
 LOWER EXPLOSIVE LIMIT: 1.00
 UPPER EXPLOSIVE LIMIT: 10.00

EXTINGUISHING MEDIA: CARBON DIOXIDE, DRY CHEMICAL, FOAM, AND/OR WATER SPRAY.

SPECIAL FIRE FIGHTING PROCEDURES:
 FIRE FIGHTERS MUST WEAR SELF CONTAINED BREATHING APPARATUS OR AIR MASKS.
 COMBATANTS EXPOSED TO FIRE SHOULD BE DEPT COOL WITH WATER SPRAY.

INDIVIDUAL FIRE AND EXPLOSIVE HAZARDS:

SECTION 5. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: NOT REQUIRED FOR THIS SUBSTANCE.

EFFECTS OF OVEREXPOSURE:

IMMEDIATE EFFECTS (ACUTE):
 CONTAINS 10% ETHER WHICH HAS BEEN SHOWN TO CAUSE BURN INJURIES, RESPIRATORY DISTRESS, AND BLADDER EFFECTS DAMAGE TO LUMBAROSPINE NERVES. CAN BE ABSORBED THROUGH THE SKIN.

MATERIAL IS FLAMMABLE, BUT AFFECTS THE BRAIN, NERVOUS SYSTEM OR RESPIRATORY SYSTEM, CAUSING DIZZINESS, HEADACHE, NAUSEA OR RESPIRATORY IRRITATION.

OVEREXPOSURE TO INGREDIENTS IN THIS PRODUCT MAY CAUSE EYE AND THROAT IRRITATION, EYE IRITATION, SKIN IRRITATION, LIVER DAMAGE, KIDNEY DAMAGE.

CHRONIC EFFECTS (CHRONIC):
 CONTAINS 10% ETHER WHICH HAS BEEN SHOWN TO CAUSE BLADDER EFFECTS DAMAGE IN LABORATORY ANIMALS.
 CONTAINS 10% ETHER WHICH HAS BEEN SHOWN TO CAUSE CANCER IN ANIMALS AND SHOWED EVIDENCE OF CANCER IN HUMANS.
 FROM HIGH EXPOSURE OVER 1000 PPM PREDICTED PNEUMOCONIOSIS.
 SHIPPER: INHALERS HAVE BEEN KNOWN TO REALEASE AND POLLUTE OCCUPATIONAL ENVIRONMENTS TO SOLVENTS WHICH PREDOMINANTLY DAMAGE THE NEURON SYSTEM DAMAGE, THROMBOARREST, IRRITATION OR INFLAMMATION CONCENTRATING AND REMOVING THE CONTENTS AND BE HARMFUL OR FATAL.
 CONTAINING INGREDIENTS WHICH MAY CAUSE EYE IRRITATION, LIVER DAMAGE, KIDNEY DAMAGE.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE - AIR RESPIRATORY AND SKIN CONDITION.

EMERGENCY AND FIRST-AID PROCEDURES:

IF SWALLOWED: GET MEDICAL ATTENTION IMMEDIATELY.
 INHALATION: REMOVE PERSON FROM EXPOSURE AREA. IF BREATHING HAS STOPPED, USE MOUTH-TO-MOUTH RESUSCITATION AND GET MEDICAL ATTENTION.
 SKIN CONTACT: FLUSH WITH WATER FOR 15 MINUTES.
 EYES CONTACT: RINSE WITH SOAP AND WATER.

POSSIBLE MODES OF ENTRY: INHALATION, INGESTION, SKIN ABSORPTION.

SECTION 6. REACTIVITY DATA

THIS PRODUCT IS STABLE
 CONDITIONS TO AVOID: NONE

INCOMPATIBILITY: STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:
 SOLVENTS OXIDIZE
 INFLAMMABLE LIQUIDS
 CARBON DIOXIDE/ANHYDROUS

HAZARDOUS POLYMERIZATION: NONE

Post-It™ brand fax transmittal memo 7671		1 of page 8
Charlotte	To:	Jo
Ca. Jd S Cont.	Co:	Mac E Inc
Regd:	Phone #	233-0181
Fax #	Fax #	265-0883 233-9526

HER 03269

SEP-1995 69:1(D) CONTRA

TELEGRAM

三

HER 03270

24

MALAR & IND SPEC

2408 233 9526

11:16

10/22/79MS
PAGE 3
S7-0437PA

<p>VALSPAR CORPORATION HAZARD DATA SHEET</p> <p>***** SECTION 2: SPILL OR LEAK PROCEDURES *****</p> <p>VENTILATE AREA. AVOID BREATHING OF VAPORS. USE SELF-CONTAINED BREATHING APPARATUS OR ATMOHERE FOR LARGE SPILLS IN A CONFINED AREA. ISOLATE IGNITION SOURCES. REMOVE BEER DRUM ABSORBENT FROM IRON-SPARKLING TOOLS. AVOID CONTACT WITH EYES.</p> <p>HAZARDOUS DISPOSAL METHOD: DISPOSE IN CHEMICAL DISPOSAL AREA OR IN A BURNER THAT COMPLIES WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSER CONTAINERS.</p> <p>***** SECTION 3: SPECIAL PROFESSIONAL INFORMATION *****</p> <p>RESPIRATORY PROTECTION: USE APPROPRIATE, PROPERLY FITTED RESPIRATOR BREATHING/MSA APPROVED DURING AND AFTER APPROXIMATELY 10 MINUTES AND HAZARDOUS HAZARD/TEST LEVELS ARE BELOW APPLICABLE LIMITS. FOLLOW RESPIRATOR MANUFACTURERS DIRECTIONS FOR RECOMMENDED USE.</p> <p>VENTILATION: REQUIRED FOR SPRAYING OR IN A CONFINED AREA. VENTILATION EQUIPMENT SHOULD BE EXPLOSION PROOF. ELIMINATE IGNITION SOURCES.</p> <p>PROTECTIVE GARMENTS: USUAL HAND PROTECTION FOR PAINT APPLICATION. EYE PROTECTION: USUAL EYE PROTECTION FOR APPLYING PAINT. OTHER PROTECTIVE EQUIPMENT: USUAL CLOTHING FOR PAINTING OPERATIONS.</p> <p>***** SECTION 4: SPECIAL PRECAUTIONS *****</p> <p>PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:</p> <p>CONTAINERS SHOULD BE CAPPED/SEALED WHEN PENDING. AVOID FREE FALL OF LIQUID IN EXCESS OF A FEW INCHES. KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAMES. KEEP CONTAINER CLOSED WHEN NOT IN USE. DO NOT STORE ABOVE 220 DEG F. BASED ON THE PRESENT FLASH POINT AND VAPOR PRESSURE, SUFFICIENT SPACE SHOULD BE PROVIDED IN ACCORDANCE WITH THESE REGULATIONS AND 100% EMPTY CONTAINERS MUST CONTAIN PRODUCT RESTRICTED. AIRCRAFT FLAMMABILITY EXPLOSIVE VAPORS. DO NOT USE. PUNCTURE OR HEAT OR HEAT CONTAINERS. ALL LADDER RAILINGS MUST BE GUARDED UNTIL THE CONTAINER HAS BEEN CLEANED OR RECONDITIONED.</p> <p>ANALYTICAL DATA USED: OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION; NIOSH-INTERLABORATORY SOURCE FILE RESEARCH ON CANCER; IARC LISTED EXPLOSIVE LIMITS; NTP-UPATED EXPOSURE LIMITS; AND EU-1000 INDEX FOR HAZARD CLASSIFICATION; AND NIOSH-INDEX OF HAZARD RATINGS; NIOSH-EXPOSURE CRITERIA; AND-NIOSH SAFETY AND HEALTH ASSISTANCE; AND-EPA-TOXICITY; AND-OECD-TOXICITY; AND-EST-ONE ESTIMATE POINT; ATP-INTERLABORATORY TOXICOLOGY PROGRAM; PC-TOTAL; PC-INDIVIDUAL EXPOSURE LEVEL; ppm-PARTS PER MILLION; TCC/TMP-TOTAL CLOUD/CLOUDY-THICKNESS; ppm-PPM; AND-YEARS SHOULD LIMIT VALUES.</p> <p>***** DISCLAIMER SECTION *****</p> <p>THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. THE VALSPAR CORPORATION MAKES NO WARRANTIES EXPRESS OR IMPLIED AND ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE DATA. THE VALSPAR CORPORATION FURTHER ASSUMES NO RESPONSIBILITY FOR PERSONAL INJURY OR PROPERTY DAMAGE TO VENDORS, USERS, OR THIRDS PARTIES CAUSED BY THIS MATERIAL. SUCH VENDORS OR USERS ASSUME ALL RISKS ASSOCIATED WITH THE USE OF THIS MATERIAL.</p>

W003

MAR & IND SPEC

0409 233 9526

11:15

06/06/96

H. P. 10/29/95

VALSPOR CORPORATION MATERIAL SAFETY DATA SHEET		10229954 PAGE 1
CUSTOMER NAME : MARINE & INDUSTRIAL		CUSTOMER NUMBER : 218500000
CUSTOMER NUMBER : 2205954		37 OVERSIZED
SECTION 1: PRODUCT IDENTIFICATION		
MANUFACTURERS ADDRESS : 1101 UNIVERSITY STREET SOUTH, MINNEAPOLIS, MN 55415		
TELEPHONE NUMBER : (612) 337-2311		
24 HR EMERGENCY PHONE NO : 1-800-222-5635		
CHEMICAL NAME OR FAMILY : POLY(1-PROPENE)		
FORMULA : OSB(1-PRO)-122-A-00		
TRADE NAME : 21 VOLCANIC TC RD EPOXY RESIN		
ISSUE DATE : 04-07-95		DATE PRINTED : 08-29-95
SECTION 2: HAZARDOUS INGREDIENTS		
APPENDIX		
INHALATION		
COMMON ID: CRYSTALLINE SILICA		
CAS: 14846-60-7	CHEMICAL: QUARTZ	4.1% IELV THM: 0.10 mg/cu m IELV STEL: NOT ESTAB OSHA PEL: 0.10 mg/cu m CEILING: NOT ESTAB RECORD: NOT ESTAB
COMMON ID: DIETHYLIC PENTHOXIDE DISTILLATES		
CAS: 10607-00-7	CHEMICAL: SOLVENT IMPURITIES APPROXIMATELY 100% BY WT ALCOHOL	1% IELV THM: NOT ESTAB IELV STEL: NOT ESTAB OSHA PEL: 500.00 ppm CEILING: NOT ESTAB RECORD: NOT ESTAB
COMMON ID: ASHC		
CAS: 10063-30-2	CHEMICAL: CARBON BLACK	5% IELV THM: 2.00 mg/cu m IELV STEL: NOT ESTAB OSHA PEL: 20.00 mg/cu m CEILING: NOT ESTAB RECORD: NOT ESTAB
COMMON ID: FAFC		
CAS: 14867-96-6	CHEMICAL: STERIC ACID, MAGNESIUM SA LI: 11:1	2% IELV THM: 10.00 mg/cu m IELV STEL: NOT ESTAB OSHA PEL: 2.00 mg/cu m CEILING: NOT ESTAB RECORD: NOT ESTAB
COMMON ID: CARBON BLACK		
CAS: 1313-65-4	CHEMICAL: CARBON BLACK	5% IELV THM: 3.00 mg/cu m IELV STEL: NOT ESTAB OSHA PEL: 3.00 mg/cu m CEILING: NOT ESTAB RECORD: NOT ESTAB
COMMON ID: LPST RESIN		
CAS: 25466-30-6	CHEMICAL: PHENOL, 4,4'-(1-METHOXY- ETHYLE BIS(4'-METHYL-4-METHOXYBUTYL)) DI-NAME	30% IELV THM: NOT ESTAB IELV STEL: NOT ESTAB OSHA PEL: NOT ESTAB CEILING: NOT ESTAB RECORD: NOT ESTAB
COMMON ID: PROPANOIC ACID		
CAS: 50-00-0	CHEMICAL: PROPANOIC ACID	4.1% IELV THM: 0.30 ppm IELV STEL: 0.30 ppm OSHA PEL: 0.75 ppm CEILING: NOT ESTAB RECORD: NOT ESTAB
COMMON ID: PROPYLENE GLYCOL MONO-2-PROPYL ETHER		
CAS: 100-50-7	CHEMICAL: 1-METHYL 2-PROPANO	10% IELV THM: 100.00 ppm IELV STEL: 100.00 ppm OSHA PEL: 100.00 ppm CEILING: NOT ESTAB RECORD: NOT ESTAB

REFINED

OCT 19 1995

VALSPOR CORPORATION MATERIAL SAFETY DATA SHEET		10229954 PAGE 2
SECTION 3: HAZARDOUS INGREDIENTS		
CUSTOMER NUMBER : MARINE & INDUSTRIAL		CONTINUATION
CAS: 110-43-0	CHEMICAL: 2-PROPANO	IELV THM: 50.00 ppm IELV STEL: NOT ESTAB OSHA PEL: 100.00 ppm CEILING: NOT ESTAB RECORD: NOT ESTAB
CHEMICALS LISTED IN THIS SDS ARE REPORTABLE UNDER SECTION 313 OF SARA TITLE III		
1) = THIS MATERIAL IS A CARCINOGEN PER NTP, IARC		
2) = THIS MATERIAL IS A MUTAGEN PER NTP, IARC, WHO		
ALL COMPONENTS OF THIS PRODUCT ARE LISTED IN THE U.S. TSCA CHEMICAL SUBSTANCE INVENTORY.		
SECTION 4: FIRE AND EXPLOSION HAZARD		
FLASH POINT: 240 DEG F BOILING PRESSURE: 4400 MM HG AT 77 DEG F = 13.0 DENSITY: 1.041 - 1.061 SPECIFIC GRAVITY: 1.033 FLASH POINT: 240 DEG F BOILING POINT: 25.70 COMBUSTION RATE: BUTYL ACETATE = 0 SMOKING POINT: 400 APPEARANCE AND COLOR: NORMAL VIOLET COATING PRODUCT.		
SECTION 5: HEALTH HAZARD DATA		
IMMEDIATE EYE VALUE: NOT REQUIRED FOR REACTION		
EFFECTS OF OVEREXPOSURE: IMMEDIATE EFFECTS (ACUTE): CAN BE ABSORBED THROUGH THE SKIN. IRRITANT IF INHALED. CAN AFFECT THE BRAIN, NERVOUS SYSTEM OR RESPIRATORY SYSTEM. CAUSES DIZZINESS, HEADACHE, NAUSEA OR RESPIRATORY IRRITATION. SUSPECT CANCER HAZARD. CONTAINS SUBSTANCES WHICH MAY CAUSE CANCER. USE OF CANCER HAZARD UPON EXPOSURE AND LEVEL OF EXPOSURE. ON EXPOSURE TO SUBSTANCES WHICH CAN CAUSE CANCER AND HIGHLY IRITATING, EYE IRRITATION, THE MOUTH, SKIN IRRITATION, ALLERGY, ACUTE REACTION, RESPIRATORY TRACT IRRITATION, PERNITITIS, CHRONIC INFLAMMATIVE DISEASE, FATALITY IF INHALED. DELAYED EFFECTS (CHRONIC): POSSIBLE SENSITIZATION. CONTAINS PROPANOIC ACID AS A POTENTIAL CONCERN. BY THE INCORPORATION DEPARTMENT AND SAFETY ADMINISTRATION. CONTAINS CRYSTALLINE SILICA WHICH MAY CAUSE CANCER IN ANIMALS BUT LIMITED EVIDENCE OF CANCER IN HUMANS. PROLONGED EXPOSURE TO INSOLUBLE CRYSTALLINE SILICA CAN ALSO CAUSE RESPIRATORY DAMAGE (ASTHMA, BRONCHITIS) PROLONGED EXPOSURE OVER TIME MAY PRODUCE PNEUMOCONIOSIS.		

HER 03271

102237488
PAGE 2
37-0071368VALSPAR CORPORATION
INDUSTRIAL SAFETY DATA SHEETSECTION 2: PHYSICAL DATA
APPEARANCE AND COLOR: BROWN FOR 6 COATING PRODUCTS.

CONTINUED

SECTION 4: FIRE AND EXPLOSION HAZARD

FLASH POINT (CCMPP): 52
LOWER EXPLOSIVE LIMIT: 1.00
UPPER EXPLOSIVE LIMIT: 10.00

CANTINQUISHING MEDIA: CARBON DIOXIDE, DRY CHEMICAL, FOAM, AQUEOUS WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES:
FIRE FIGHTERS MUST WEAR SELF CONTAINED BREATHING APPARATUS OR AIR BAGS.
CONTAINERS EXPOSED TO FIRE SHOULD BE KEPT COOL WITH WATER SPRAY.UNUSUAL FIRE AND EXPLOSIVE HAZARDS:
None

SECTION 5: HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: NOT REQUIRED FOR HAZARD.

EFFECTS OF OVEREXPOSURE:
IMMEDIATE EFFECTS: ANESTHESIA:EYE IRRITATION:
CAN BE ABSORBED THROUGH THE SKIN.
SYMPTOMS IF INHALED: MAY AFFECT THE BRAIN, NERVOUS SYSTEM OR RESPIRATORY SYSTEM. CAUSING DIZZINESS, HEADACHE, NAUSEA OR RESPIRATORY IRRITATION.
SKIN IRRITATION TO INHALATION OF THIS PRODUCT MAY CAUSE NOSE AND MOUTH IRRITATION, EYE IRRITATION, SKIN IRRITATION, LIVER DAMAGE, STOMACH DAMAGE, CNS DEPRESSION, & NEAL TUBE/SPINE DAMAGE.
DELAYED EFFECTS: ANESTHESIA.NOTICE: REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED EXPOSURE WITH SENSITIZATION TO SUBSTANCES WITH NEURONAL BRAIN AND NERVOUS SYSTEM DAMAGE. INHIBITION OF VISION BY NEURONALLY DISINTEGRATING AND INHIBITING THE CONTENTS OF THE BRAIN OR SPINAL CORD.
CONTAINS INGREDIENTS WHICH MAY CAUSE LONG TERM LATENT LIVER DAMAGE, STOMACH DAMAGE, HEARING LOSS.

MEDICAL CONDITIONS GROWINGLY AGGRAVATED BY EXPOSURE: DRY RESPIRATORY OR SKIN CONDITION.

EMERGENCY AND FIRST AID PROCEDURES:
EYE CONTACT: FLUSH IMMEDIATELY WITH PLURALS OF WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION.
SKIN CONTACT: WASH THOROUGHLY WITH SOAP AND WATER.
CLOTHING: REMOVE CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE USE. IMMEDIATELY CLEAN CONTAMINATED SHOES.
INHALATION: IF INHALATION OF VAPOR OR SPRAY OCCUR, REMOVE TO FRESH AIR.
SWALLOWING: IF SWALLOWED, GET MEDICAL ATTENTION IMMEDIATELY.

POSSIBLE ROUTES OF ENTRY: INHALATION, INGESTION, SKIN ABSORPTION.

SECTION 6: STABILITY & REACTIVITY DATA

THIS PRODUCT IS STABLE
CONDITIONS TO AVOID: None
INCOMPATIBILITY: STRONG OXIDIZERS

ACIDS OR ALKALIES

HAZARDOUS DECOMPOSITION PRODUCTS:
CARBON DIOXIDE/PHOSPHINE

HAZARDOUS POLYMERIZATION: None

4005

MAR-A IND SPEC

RECEIVED OCT 3 0 1992

#408 233 9526

11:17 09/06/96

CUSTOMER NAME: MARINE & INDUSTRIAL		CUSTOMER NUMBER: 710500000
CUSTOMER ADDRESS: 2227403		
MANUFACTURERS ADDRESS: 1301 10th STREET SOUTH MINNEAPOLIS, MN 55415		
REG TELEPHONE NUMBER: (612) 332-2871		
24 HR EMERGENCY PHONE NO: 1-800-278-5875		
CHEMICAL NAME OR FAMILY: PAINT PRODUCT		
FORMULA: ZEPATOP-RED-A-04		
TOXIC STATE: ST. 710500 TERMINAL		
TEST DATE: 03-22-92 DATE PRINTED: 10-26-92		
SECTION 2: HAZARDOUS INGREDIENTS		
NAME	APPROX WT %	
COMMON NAME: 0-BUTYL ALCOHOL	30%	TLV TWA: 50.00 PPM TLV STEL: NOT ESTAB. OSHA PEL: NOT ESTAB. CEILING: 50.00 PPM MECOMM: NOT ESTAB.
CAS: 71-36-3 CHEMICAL: 1-BUTANOL		
COMMON NAME: PROPYLENE GLYCOL MONO-N-ETHYL ETHER	10%	TLV TWA: 100.00 PPM TLV STEL: 100.00 PPM OSHA PEL: 100.00 PPM CEILING: NOT ESTAB. MECOMM: NOT ESTAB.
CAS: 107-90-2 CHEMICAL: 1-BUTYL 2-PROPANOL		
COMMON NAME: ISOPROPYL ACETATE	30%	TLV TWA: 250.00 PPM TLV STEL: 250.00 PPM OSHA PEL: 250.00 PPM CEILING: NOT ESTAB. MECOMM: NOT ESTAB.
CAS: 100-21-4 CHEMICAL: ACETIC ACID, 3-NITRO ETHYL ESTER		
COMMON NAME: BENTYL N-AMIN BENEZE	5%	TLV TWA: 50.00 PPM TLV STEL: NOT ESTAB. OSHA PEL: 50.00 PPM CEILING: NOT ESTAB. MECOMM: NOT ESTAB.
CAS: 106-43-6 CHEMICAL: 2-NPENONE		
COMMON NAME: VAPOR INHIBITOR	10%	TLV TWA: 300.00 PPM TLV STEL: NOT ESTAB. OSHA PEL: 300.00 PPM CEILING: NOT ESTAB. MECOMM: NOT ESTAB.
CAS: 6032-32-6 CHEMICAL: ETHERINE		
COMMON NAME: TOLUENE	0%	TLV TWA: 100.00 PPM TLV STEL: 100.00 PPM OSHA PEL: 100.00 PPM CEILING: NOT ESTAB. MECOMM: NOT ESTAB.
CAS: 108-08-8 CHEMICAL: PROPYL NITRILE		
COMMON NAME: ETYLINE	5%	TLV TWA: 100.00 PPM TLV STEL: 100.00 PPM OSHA PEL: 100.00 PPM CEILING: NOT ESTAB. MECOMM: NOT ESTAB.
CAS: 1036-26-7 CHEMICAL: PROPENYL NITRILE		
COMMON NAME: 0-PPD SALT		
SECTION 3: PHYSICAL DATA		
BOILING POINT: 107.0°C		
VAPOR PRESSURE: 100 MM Hg at 52.0°C: 40.0		
VAPOR DENSITY: 1.00: 0.1		
SPECIFIC GRAVITY: 0.90:		
DENSITY AT 40°C: 1.00: 0.0		
EVAPORATION RATE (WHITE SPIRITS): 0:		
SOLUBILITY IN WATER: ND		

1000

HER 03273

4006

MATERIAL SPEC

409 253 9528

08/06/96 11:11

**V&S PARTNERSHIP
MATERIAL SAFETY DATA SHEET**

102227408
PAGE 3
33-007035B

***** SECTION 7: SPILL OR LEAK PROCEDURES *****

VENTILATE AREA. AVOID BREATHING IN VAPORS. USE SELF-CONTAINED BREATHING APPARATUS OR ALARMED FOR LARGE SPILLS IN A CONTINUED AREA. ELIMINATE IGNITION SOURCES. REMOVE WITH DRY ABSORBENT AND NON-SPARKING TOOLS. AVOID CONTACT WITH EYES.

WASTE DISPOSAL METHODS:
DISPOSE IN CHEMICAL DISPOSAL AREA OR IN A MANNER THAT COMPLIES WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.

***** SECTION 8: SPECIAL PROTECTION INFORMATION *****

RESPIRATORY PROTECTION:
WEAR APPROPRIATE, PROPERLY FITTED RESPIRATOR (INDIVIDUAL APPROVALS DURING AND AFTER APPLICATION UNLESS AIR MONITORING VERIFICATIONS REVEALS NO EXC. APPLICABLE LIMITS. FOLLOW RESPIRATOR MANUFACTURER'S DIRECTIONS FOR RESPIRATOR USE).

VENTILATION:
REQUIRED FOR SPRAYING OR IN A CONTINUED AREA. VENTILATION EQUIPMENT SHOULD BE EXPLOSION PROOF. ELIMINATE IGNITION SOURCES.

PROTECTIVE GLOVES: USUAL HAND PROTECTION FOR PAINT APPLICATION.
THE PROTECTION DEPENDS ON THE APPLICATION POINT.
OTHER PROTECTIVE EQUIPMENT: WEARING CLEANING AND PROTECTIVE OPERATIONS

***** SECTION 9: SPECIAL PRECAUTIONS *****

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

CONTAINERS SHOULD BE CHAMFERED/BONDED WHEN POURING. AVOID FREE FALL OR LIQUID IN EXCESS OF A FEW INCHES.
KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAMES. KEEP CONTAINER CLOSED WHEN NOT IN USE. DO NOT STORE ABOVE 120 DEG F. BASED ON THE PRODUCT FLASH POINT AND VAPOR PRESSURE, SUITABLE SURFACE SHOULD BE PROVIDED IN ACCORDANCE WITH STATE REGULATION 1010. 310. EMPTY CONTAINERS MAY CONTAIN PRODUCT RESIDUE, INCLUDING FLAMMABLE OR EXPLOSIVE VAPORS. DO NOT CUP, PUNCTURE OR HEAT ON OR NEAR CONTAINER. ALL LABEL WARNINGS MUST BE OBSERVED UNTIL THE CONTAINER HAS BEEN CLEANED OR RECONDITIONED.

ABBREVIATIONS USED:

OSHA- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION;
IARC- INTERNATIONAL AGENCY FOR RESEARCH ON CANCER; ICL-UNION CARBIDE; NFPA- NATIONAL FIRE PROTECTION ASSOCIATION;
NIOSH- NATIONAHL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH; ADI-EST-NOT ESTABLISHED; NTP- NATIONAL TOXICOLOGY PROGRAM;
PP-YEAR- PPT- PERMISSIVE EXPOSURE LEVEL; PPB-PARTS PER BILLION;
TSCA/PM-TCI- CLOSED CUP/PRIMARY MARSHALL LAW- RECOMMENDED TLV-THRESHOLD L1001 VALUES.

***** DISCLAIMED SECTION *****

ALL INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE.
THE PARTNERSHIP MAKES NO WARRANTIES EXPRESS OR IMPLIED AND ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE DATA. THE PARTNERSHIP
FURTHER ASSUMES NO RESPONSIBILITY FOR PERSONAL INJURY OR PROPERTY
DAMAGE TO VEHICLES, INSURANCE, OR THIRD PARTIES CAUSED BY THIS MATERIAL. SUCH
USERS OF USERS ASSUME ALL RISKS ASSOCIATED WITH THE USE OF THIS MATERIAL.

HER 03274

SEP-08-1996 10:53 10:53 S CONTR
08/08/96 11:18 409 233 8526
08/08/96 11:18 409 233 8526

TEL 908-426-2660-0860
MAR & IND SPEC
NAUTICAL PAINT INC

PAGE 006
PAGE 007

SERIES 3000

MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER: NAUTICAL PAINT CORP. INFO PHONE: (908) 247-8400
1525 ROUTE 1 EMERG. " (800) 424-7300

N. BRUNSWICK, NJ 08902

VOC: 3.76 LBS/GAL - 450 GRAMS/LITER - (MAX.- DEPENDING ON COLOR)
PRODUCT CLASS: ACRYLIC PRODUCT CODE: 3000 SERIES

SECTION II - HAZARDOUS INGREDIENTS

CAS NO.	INGREDIENT	UNITS	V.P.
64742-47-9	MINERAL SPIRITS	PPM	2.0

SECTION III - PHYSICAL DATA

BOILING RANGE: 175-375 F. - VAPOR DENSITY: HEAVIER THAN AIR
WEIGHT PER GALLON: 8.2 - 11.6 - LIQUID DENSITY: " WATER

SECTION IV - FIRE & EXPLOSION DATA

FLAMMABILITY CLASSIFICATION: COMBUSTIBLE

FLASH POINT: ABOVE 100 F.

EXTINQUISHING DATA: CARBON DIOXIDE, DRY CHEMICAL

UNUSUAL FIRE & EXPLOSION DATA:

KEEP CONTAINERS CLOSED TIGHTLY. ISOLATE FROM HEAT, SPARKS,
AND OPEN FLAMES. CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME
HEAT.

SPECIAL FIREFIGHTING PROCEDURES:

WEAR FULL PROTECTIVE EQUIPMENT. SELF CONTAINED BREATHING
ELEMENT SHOULD BE USED. USE FOAM NOZZLES IF USING WATER. USE WATER
TO COOL CLOSED CONTAINERS.

SECTION V - HEALTH HAZARD DATA

PERMISSABLE EXPOSURE LIMITS: SEE SECTION II

EFFECTS OF OVEREXPOSURE: OVEREXPOSURE CAUSES EYE, SKIN, AND
RESPIRATORY IRRITATION. MAY CAUSE HEADACHE, DIZZINESS, NAUSEA.
PROLONGED OVEREXPOSURE TO INGREDIENTS IN SECTION II MAY CAUSE
ADVERSE EFFECTS TO THE LIVER, URINARY, BLOOD FORMING, AND
REPRODUCTIVE SYSTEMS.

Post-It® Fax Note	7671	Date 9-6-96	No. of pages 6
To	Larry	From	
Co/Dept.	Herriles	Co.	J.S Contractors
Phone #		Phone #	
Fax #	223-6375	Fax #	

HER 03275

SECTION VI - REACTIVITY DATA

STABILITY: STABLE

INCOMPATIBILITY:

CONTAMINATION WITH WATER, ACIDS, OR ALKALIS CAN CAUSE EVOLUTION OF HYDROGEN, WHICH MAY RESULT IN DANGEROUSLY INCREASED PRESSURES IN CLOSED CONTAINERS.

SECTION VII - SPILL & LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED:

REMOVE ALL SOURCES OF IGNITION. VENTILATE AND REMOVE WITH INERT ABSORBANT.

WASTE DISPOSAL METHOD:

WASTE FROM THIS PRODUCT MAY BE HAZARDOUS. WASTE MUST BE TESTED FOR IGNITABILITY TO DETERMINE THE APPLICABLE EPA HAZARDOUS WASTE NUMBERS. DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS.

SECTION VIII - PROTECTION INFORMATION

PRECAUTIONS TO BE TAKEN IN USE:

USE ONLY WITH ADEQUATE VENTILATION. AVOID BREATHING VAPOR AND SPRAY MIST. AVOID CONTACT WITH SKIN AND EYES. WASH HANDS AFTER EACH USE.

PROTECT AGAINST DUST WHICH MAY BE GENERATED BY SANDING THE DRIED FILM.

OPEN ALL DOORS AND WINDOWS DURING APPLICATION TO ENSURE FRESH AIR ENTRY DURING APPLICATION.

SECTION IV - PRECAUTIONS

PRECAUTIONS TO BE TAKEN DURING USE:

KEEP CONTAINERS CLOSED AT ALL TIMES. KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAMES. DURING USE AND UNTIL ALL VAPORS ARE GONE, DO NOT SMOKE. EXTINGUISH ALL FLAMES, PILOT LIGHTS, AND HEATERS. TURN OFF ANY POWER TOOLS AND ANY OTHER SOURCE OF IGNITION.

INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL.

HEALTH: 2 - FLAMMABILITY: 1 - REACTIVITY: 1

FOR INDUSTRIAL USE ONLY

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE, BUT IS NOT WARRANTED TO BE. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF THEIR NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE FOR THEIR CIRCUMSTANCES. ADDITION OF ANY REDUCERS OR ANY ADDITIVES TO THIS PRODUCT MAY SUBSTANTIALLY ALTER THE COMPOSITION AND HAZARDS OF THIS PRODUCT. SINCE CONDITIONS OF USE ARE OUTSIDE OUR CONTROL, WE ASSUME NO LIABILITY.

MATERIAL SAFETY DATA SHEET
FOR COATINGS, RESINS AND RELATED MATERIALS

Ameron Protective Coatings 55849
201 North Berry Street
Brea, CA 92622-1020
NSN: 8010-01-302-3605
GSM: GS-10F-52192

INQUIRIES: (714) 990-1111
Emergency (800) 424-9141
Production Date: 10-29-97
Expiry Date: 10-29-98

SECTION 1 -- PRODUCT IDENTIFICATION

TRADE NAME: MIL-P-24441/SC F-154 DARK GRAY RHM3.6 COATING
PRODUCT CLASS: EPOXY COATING
PRODUCT NO: 3364300

SECTION 2 -- HAZARDOUS INGREDIENTS

INGREDIENTS	CAS NO.	X WT %	EFFECTIVE CONC.	TOTAL CONC.	TOXICITY DATA
EPOXY RESIN	25068-38-6	<55	-----	-----	-----
MAGNESIUM SILICATE	14807-96-6	<30	-----	-----	-----
HIGH FLASH NAPHTHA POLYAMIDE	64742-95-6	19.42	19.42	19.42	-----
XYLENE (SARA)	1330-20-7	1.02	1.02	1.02	-----

** CALIF. TITLE 26: 22-12000 (PROP 65)

Contains toxic chemical subject to reporting requirement

SECTION 3 -- PHYSICAL DATA

BOILING RANGE: 282-313 Deg. F VAPOR DENSITY: High
VOLATILE VOLUME X : 30 EVAPORATION RATE: Slow
WT PER GAL: 10.5 LBS LOW: 0.37 HIGH: 0.60
APPEARANCE: Liquid ODOR: Solvent
SOLUBILITY IN WATER: Insoluble VOC, mixed: 330 mg/m³ > 64 ppm

SECTION 4 -- FIRE AND EXPLOSION HAZARDS

FLAMMABILITY: Combustible (S) - 100% flammable
FLASH POINT: 100°F (37.8°C)

EXTINQUISHING MEDIA: Foam, CO₂, dry chemical

UNUSUAL FIRE AND EXPLOSION HAZARDS: May self-ignite and explode when exposed to heat. Isolate from

FIREFIGHTING PROCEDURES: Wear full protective equipment

(C)=Ceiling; (S)=Skin; LD50=Oral,mg/kg; LC50=Inhalation,mg/liter; Solvent
chandise not available

HER 03277

SECTION 5 -- HEALTH HAZARD DATA**ENTRY ROUTES:** Inhalation and skin contact.**MEDICAL CONDITIONS AGGRAVATED:** Respiratory. Allergies. Kidney and liver disorders. Skin. Eyes.**EXPOSURE EFFECTS:** Vapor, spray mist and/or dust can be harmful. Irritating to skin, mucous membranes, eyes and respiratory system. Excessive inhalation can cause headache, nausea, dizziness or asphyxiation. Repeated and prolonged occupational overexposure to solvents is associated with permanent brain and nervous system damage. Can be harmful if swallowed. Overexposure can damage central nervous system. Overexposure or ingestion can cause lung, kidney and/or liver damage. Skin sensitization or allergic reaction can occur such as rash or hives. Chemical pneumonia. Aspiration hazard.**EMERGENCY AND FIRST AID PROCEDURES:** Overexposure to vapor, spray mist or dust - provide fresh air; if breathing labored, give oxygen. Get medical attention. For skin contact, wash thoroughly with soap and water. For eyes, flush immediately with copious amounts of water for at least 15 minutes and get medical attention. If swallowed, drink 1 or 2 glasses of water to dilute. Do not induce vomiting. Consult physician or poison control center IMMEDIATELY without symptoms.**SECTION 6 -- REACTIVITY DATA****STABILITY:** Stable. **CONDITIONS TO AVOID:** Heat, open flame, arc or sparks.**INCOMPATIBILITY (MATERIALS TO AVOID):** Strong oxidizers, acids, alkalies.**HAZARDOUS DECOMPOSITION PRODUCT BY FIRE, BURNING OR WELDING:** CO and CO₂. NO_x. Aldehydes.**HAZARDOUS POLYMERIZATIONS:** Will not occur.**SECTION 7 -- SPILL/LEAK PROCEDURES****SPILL/LEAKAGE PREVENTION:** Use absorbent cleanup materials or sweep up. Place in absorbent containers and seal tightly. Store in a safe place away from ignition sources.**WASTE DISPOSAL:** In appropriate closed metal container in accordance with all applicable regulations.**EPA NUMBER:** None**SECTION INFORMATION****RESPIRATORY PROTECTION:** Use respirators and protective clothing. Use NIOSH approved respirators. For specific conditions refer to NIOSH Pocket Guide to Industrial Respirators. Use respirators in confined or restricted areas where exposure may be high. Refer to 29 CFR, OSHA parts 1910, 1915, and 1916 for complete information.**VENTILATION:** Use local exhaust ventilation or general process enclosure. General process enclosures, when used, should be provided to keep air contaminant concentrations below permissible exposure limits. Use cutting decomposition products. Refer to 29 CFR, OSHA part 1910, section 1910.1000.**PROTECTIVE CLOTHING:** Use protective clothing, including respirators, as required.**EYE PROTECTION:** Safety glasses or goggles.**OTHER PROTECTION:** Use protective clothing, including respirators, as required. Full protective clothing. Spark-proof equipment.**HYGIENIC PRACTICES:** Wash hands before eating, smoking or using washroom. Launder contaminated clothing before reuse.**SECTION 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION****HANDLING AND STORAGE:** Avoid breathing dust, vapors or spray mist when not in use. Store in cool, dry, well-ventilated area. Avoid temperatures above 100 degrees Fahrenheit.**OTHER PRECAUTIONS:** Do not take internally. Avoid prolonged breathing of dust, vapors or spray mist or contact with skin and eyes. Do not hold or transport an empty container. Ground containers when pouring. Destroy contaminated leather and asbestos shoes which cannot be decontaminated.

<<2 Page Document>>

HER 03278

MATERIAL SAFETY DATA SHEET
FOR COATINGS, RESINS AND RELATED MATERIALS

Ameron Protective Coatings 55849
201 North Berry Street
Brea, CA 92622-1020
NSN: 8010-01-302-3605
GS#: GS-10F-52192

Information: (714) 529-1951 (H. Kline)
Emergency: (800) 424-9300 (CHEMREC)
Preparation Date: 11-08-91
Supersedes: 10-29-91

SECTION 1 -- PRODUCT IDENTIFICATION

TRADE NAME: MIL-P-24441/SC F-154 DARK GRAY RO=3.6 COMP A
PRODUCT CLASS: EPOXY COATING
PRODUCT NO: 3364200

FOR INDUSTRIAL USE ONLY
HEALTH: WARNING

SECTION 2 -- HAZARDOUS INGREDIENTS

INGREDIENTS	CAS NO.	X WT	EXPOSURE LIMITS			VP 68 F	TOXICITY LD50 g/kg	LC50 ppm
			OSHA PEL	ACGIH mg/m ³	TLV (TWA) mg/m ³			
MAGNESIUM SILICATE	14807-96-6	<40	dn/a	2	dn/a 2 (RESPIRABLE QUARTZ <0.1%)	na	na	na
BUTYL ALCOHOL (SARA,CERCLA)	71-36-3	31.18	50 C,S	150CS 50 C,S 150 C,S (STEL 50ppm)	4.3	2.5	8000	
POLYAMIDE ADDUCT RESIN	dn/a	<25	dn/a	dn/a dn/a dn/a (<4% TETA)	na	dn/a	dn/a	
AMIDO AMINE RESIN	68443-08-3	<5	dn/a	dn/a dn/a dn/a (TEPA & <5%)	na	1.2	dn/a	
TITANIUM DIOXIDE	13463-67-7	<5	dn/a	10 dn/a 10 (AS Ti, POSSIBLE IMPURITIES, <10% SILICA [AMORPHOUS], <6% ALUMINUM HYDROXIDE)	na	24	6820	
CARBON BLACK XYLENE (SARA)	1333-86-4 1330-20-7	<5 1.31	dn/a 100	3.5 dn/a 3.5 435 100 435 (STEL 150ppm, Benzene** & 0-900ppm)	na 6.6	dn/a 4.3	dn/a 6700	

** CALIF. TITLE 26: 22-12000 (PROP 65)

Contains the chemical subject to reporting requirements of SARA and CERCLA (40CFR 302,355,372)

SECTION 3 -- PHYSICAL DATA

BOILING RANGE: 244-282 Deg. F	VAPOR DENSITY: Heavier than air	CORROSION RATE: na
VOLATILE VOLUME % : 51	EVAPORATION RATE: Butyl acetate = 1	AUTOIGNITION: 650
WT PER GAL: 10.5 LBS	LOW: 0.50 HIGH: 0.80	DECOMPOSITION TEMP: na
APPEARANCE: Liquid	ODOR: Solvent	pH: na
SOLUBILITY IN WATER: na	VOC, mixed: 335 g/l, 2.8 lbs/gal	VISCOSITY: > 68 KU

SECTION 4 -- FIRE AND EXPLOSION DATA

FLAMMABILITY:	OSHA: Flammable - 1C	FLASH POINT: 99 F (SETA)	LFS: 1330-20-7
DOT:	Flammable, 1991 49CFR	LEL: 1.00	UEL: 11.20
	Paint UN1263	US Postal - nonshippable	

EXTINGUISHING MEDIA: Foam, CO₂, dry chemical.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Wear self-contained breathing apparatus. Closed containers may explode when exposed to extreme heat. Isolate from heat, electrical equipment, sparks and open flame. Vapors may spread long distances, cause flash fire or ignite explosively.

FIREFIGHTING PROCEDURES: Wear full protective equipment, self-contained breathing apparatus.

(C)=Ceiling; (S)=Skin; LD50=Oral,rat; LC50=Inhalation,rat; LFS=Lowest Flashing Solvent
dn/a=data not available; ne/not applicable; b=ppb

HER 03279

SECTION 5 -- HEALTH HAZARD DATA

ENTRY ROUTES: Inhalation and skin contact.

MEDICAL CONDITIONS AGGRAVATED: Respiratory. Kidney and Liver disorders. Skin. Eyes.

EXPOSURE EFFECTS: Vapor, spray mist and/or dust can be harmful. Irritating to skin, mucous membranes, eyes and respiratory system. Excessive inhalation can cause headache, nausea, dizziness or asphyxiation. Repeated and prolonged occupational overexposure to solvents is associated with permanent brain and nervous system damage. Can be harmful or fatal if swallowed. Overexposure can damage blood, central nervous system. Overexposure or ingestion can cause lung, kidney and/or liver damage. Overexposure can cause severe eye and skin burns and/or injury. Skin and respiratory sensitization and allergic reaction such as rash, hives or asthma can occur. Chemical pneumonia. Aspiration hazard.

EMERGENCY AND FIRST AID PROCEDURES: Overexposure to vapor, spray mist or dust - provide fresh air; if breathing labored, give oxygen or artificial respiration. For skin contact, wash thoroughly with soap and water. For eyes, flush immediately with plenty of water for at least 15 minutes and get medical attention. If swallowed, drink 1 or 2 glasses of water to dilute. Do not induce vomiting. Consult physician or poison control center IMMEDIATELY. Treat symptomatically.

SECTION 6 -- REACTIVITY DATA

STABILITY: Stable CONDITIONS TO AVOID: Heat, open flame, arc or sparks.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, acids, alkalies. Epoxies under uncontrolled conditions.

HAZARDOUS DECOMPOSITION PRODUCT BY FIRE, BURNING OR WELDING: CO and CO₂. NO_x. Toxic gases.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION 7 -- SPILL OR LEAK PROCEDURES

SPILLS, LEAKS: Avoid breathing of vapors or dust. Use absorbent cleanup materials or sweep up. Place in separate container. Keep out of sewers and waterways. If entry is threatened or occurs, notify local authorities. Eliminate all sources of ignition.

WASTE DISPOSAL: In separate, closed metal container in accordance with all applicable regulations.

EPA WASTE NO: D001 U031 D002 U239

SECTION 8 -- SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NIOSH/MSHA certified respirator. For specific conditions refer to NIOSH Pocket Guide to Chemical Hazards, DHEW NO 78-210. Use air-line respirators in confined or restricted ventilation areas, or with polyurethane or isocyanates. Refer to 29 CFR, OSHA parts 1910, 1915, and 1916 for coating operations.

VENTILATION: Sufficient ventilation, in volume and pattern, should be provided to keep air contaminant concentrations below TLV limit. Remove welding or flame cutting decomposition products. Refer to 29 CFR, OSHA parts 1910, 1915, and 1916 for coating operations.

PROTECTIVE GLOVES: Neoprene or other suitable materials.

EYE PROTECTION: Splash-proof goggles or face shield.

OTHER PROTECTIVE EQUIPMENT FOR APPLICATION OR CLEANUP: Full protective clothing. Spark-proof equipment.

HYGIENIC PRACTICES: Wash thoroughly before eating, smoking or using washroom. Launder contaminated clothing before reuse.

SECTION 9 -- SPECIAL PRECAUTIONS

HANDLING AND STORING: Keep container closed, upright when not in use. Store in cool, dry, well-ventilated area. Avoid storage temperatures above 100 degrees Fahrenheit.

OTHER PRECAUTIONS: Do not take internally. Avoid prolonged breathing of dust, vapors or spray mist or contact with skin and eyes. Do not weld or flame cut an empty container. Ground containers when pouring. Destroy contaminated leather and absorbent shoes which cannot be decontaminated.

<<2 Page Document>>

HER 03280



Pre-Prime 167

Rust Penetrating Sealer

One - on - each

Catalog Number 167-K-XXXX

FEATURES	RECOMMENDED USES
Reinforces Rusty Steel Substrates	The extraordinary penetrating properties of Pre-Prime 167 Sealer provide a means of reinforcing rusty steel substrates-this in turn insures the adhesion of subsequent coatings.
Penetrates Through Rusty Surfaces	
Cures to a Tough, Water Resistant Coating	
100% Volume Solids	<ul style="list-style-type: none"> Recommended in areas where, due to restrictions or economics, blasting or thorough hand cleaning is not feasible. Very effective sealer and/or reinforcement for concrete, masonry or wood surfaces. Excellent sealer for aged "white rusted" zinc surfaces.

SPECIFICATION DATA	
Coating Type	100% Solids epoxy
Colors	Catalog Number
Clear	167-K-0000
Packaging	4 Gallon and 1 Gallon two-component kits
Component Ratio	3 to 1 by volume
Gloss	Medium sheen
Flash Point	135°F (43°C) Setaflash
Thinner	Do not thin
Pot Life	4 hours at 77°F (25°C)
Shelf Life	More than 1 year
Density	8.5 Lbs/Gal (1.02 kg/l)
VOC	Theoretical - 0 EPA 24 - 1.7 lbs/gal.(204 Grams per liter)
Temp. Resistance	250°F (121°C) dry
Volume Solids	100%
Theoretical Spreading Rate	1604 Sq. Ft/Gal at 1 mil 39.3 Sq. m/l at 25 microns
Recommended Film Thickness	1.5 wet mils to obtain 1.5 dry mils
Application	Air spray, brush or roller
Dry Time	At 77°F (25°C), 50% RH Overnight

HER 03281